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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DRYDEN, MATTHEW DUTTON

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,490	Applicant(s) DUROUSSEAU, DONALD R.	
	Examiner Matthew D. Dryden	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-28 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/8/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electrolyte plug, virtual reality glasses, an auditory system or a haptic system, and the second computing unit, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 11, 17, 18,19, and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Farwell (4941477).

Regarding claims 1 and 11, Farwell discloses an apparatus for the detection of deception comprising:

a sensor placement unit having a plurality of sensors (the sensor placement can be viewed as the unit that the EEG electrodes are connected to and specific placements are given for the electrodes see Column 6, lines 31-43),

a digital acquisition unit that receives signals from the sensor placement unit comprising, one or multichannel amplifiers (amplifiers that have multiple inputs that can be viewed as multichannel amplifiers see Column 6, lines 44-58), one or more digital signal processing units (can be viewed as the A to D converter, see Column 6, lines 44-58), and a computing unit (element 30 in Figure 2),

and a virtual reality system, which is defined in one embodiment by the applicant as containing one of the following: an auditory system for directing audio stimuli, a visual system for directing visual stimuli to the examinee or a haptic system for directing tactile stimuli; the device of Farwell comprises a visual system for directing visual stimuli to the examinee (see Column 5, lines 4-10).

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Regarding claim 4, see Column 5, lines 4-18, also see column 1, lines 22-35.

Regarding claim 17, Farwell discloses a method comprising:

stimulating one or more senses of an examinee (see Column 5, lines 19-29),

questioning the examinee, which is the same as interrogating the individual (see Column 4, lines 19-35),

determining psychophysiological data from the examinee, (see column 3, lines 8-23),

analyzing the psychophysiological data (see Column 10, lines 1-29),

and determining a likelihood of deception (see abstract and entire specification).

Regarding claim 18, see Column 3, lines 14-17.

Regarding claim 19, the analysis of Farwell is performed using a computer.

Regarding claim 25, the apparatus and method of Farwell comprises a device for directing visual stimuli (see Column 5, lines 4-18).

Regarding claim 26, the likelihood of deception is based on presenting one or more particular stimuli using the virtual reality system (see Column 5, lines 4-18 and abstract).

Regarding claims 27 and 28,

a sensor placement unit having a plurality of sensors (the sensor placement can be viewed as the unit that the EEG electrodes are connected to and specific placements are given for the electrodes see Column 6, lines 31-43),

a digital acquisition unit that receives signals from the sensor placement unit see around elements 20 and 30 in Figure 2,

and a virtual reality system, which is defined in one embodiment by the applicant as containing one of the following: an auditory system for directing audio stimuli, a visual system for directing visual stimuli to the examinee or a haptic system for directing tactile stimuli; the device of Farwell comprises a visual system for directing visual stimuli to the examinee (see Column 5, lines 4-10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell in view of Farwell (5406956). Farwell discloses the claimed invention except for the sensor placement unit and the digital acquisition unit being wearable. Farwell teaches a method and apparatus for truth detection that teaches it is known to provide a sensor placement unit and a digital acquisition unit with a wearable structure (see Columns 96-98, lines 48-58) to make sure the electrodes stay in a specific place on the examinee and to reduce the clutter of the system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell with a wearable sensor placement unit, as taught by Farwell, to make sure the electrodes stay in a specific location on the examinee and to reduce the clutter of the system.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell in view of Gevins (5447166), and further in view of Stirbl et al (5507291). Farwell discloses the claimed invention except for the device comprising approximately eighteen to 42 sensors, and wherein one sensor includes an event channel and a video channel. Gevins teaches it is known to provide a multitude of electrodes specifically between 19-56 (see Column 6, lines 55-56), which covers the range of the applicant, to provide a valid measurement of the mental capacity of the individual and covers the entirety of the scalp. Stirbl et al teaches it is known to provide a video channel on a sensor (see columns 9-10, lines 58-5, and column 13, lines 6-17) and an event channel on a sensor (wherein the event can be the movement of the individual see Column 6, lines 40-56, also see column 7, lines 35-52, where the event can be a multitude of responses), to allow for visual recording of the individual during examining and to be able to monitor other characteristics of the examinee. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell with multiple electrodes, as taught by Gevins, to provide a valid measurement of the mental capacity of the individual and covers the entirety of the scalp. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device Farwell with a video channel and event channel, as taught by Stirbl et al, to allow for visual recording of the individual during examining and to be able to monitor other characteristics of the examinee.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell in view of Cartmell (Re. 32,724). Farwell discloses the claimed invention except

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for the electrodes comprising an electrolyte plug and the plug being removably attached. Cartmell teaches it is known to provide an electrode with an electrolyte plug that is removably attached (see Abstract and Columns 2-4, lines 3-59), to allow for easy removal of the electrolyte-containing portion from the body and provides a safe medium between the electrode and the body. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell to include electrolyte plugs that are removable, as taught by Cartmell, to allow for easy removal of the electrolyte containing portion from the body and provides a safe medium between the electrode and the body.

Claims 8 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell in view of Farwell (5467777). Farwell discloses the claimed invention except for the data acquisition device generating normalized data results. Farwell discloses it is known to generate normalized data to provide information of the relative guilt or innocence of an examinee (Column 11, lines 14-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell with a step of generating normalized data, as taught by Farwell, to provide information of the relative guilt or innocence of an examinee.

Regarding claim 20, Farwell discloses the claimed invention and methods except for a computer performing one or more of the list in claim 20. Farwell teaches it is known to provide a computer capable of performing an EOG (see Column 18, lines 5-10), to determine if the examiner is concealing information or to communicate directly from a brain to a computer. It would have been obvious to one having ordinary skill in

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the art at the time the invention was made to modify the device and method of Farwell with a method step of determining an amplitude for each sensor and analyzing the relationship between different amplitudes, as taught by Farwell, to determine if the examiner is concealing information or to communicate directly from a brain to a computer.

Regarding claim 21, Farwell discloses the claimed invention and methods except for determining an amplitude for each sensor and analyzing the relationship between different amplitudes. Farwell teaches it is known to provide methods for determining a amplitude for each sensor and analyzing the relationship between different sensors (see Columns 7-8, lines 63-24), to determine if the examiner is concealing information or to communicate directly from a brain to a computer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device and method of Farwell with a method step of determining an amplitude for each sensor and analyzing the relationship between different amplitudes, as taught by Farwell, to determine if the examiner is concealing information or to communicate directly from a brain to a computer.

Regarding claim 22, see Column 15 of Farwell (5467777), lines 32-50.

Regarding claim 23, Farwell discloses the claimed method except for determining a value for one of the following: high-order executive workload, arousal, engagement, attention and stress. Farwell teaches it is known to determine the arousal of an individual to determine whether or not the examinee is telling the truth or trying to conceal information (see Column 2, lines 18-31). It would have been obvious to one

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having ordinary skill in the art at the time the invention was made to modify the device and method of Farwell with a method step of determining a value of arousal, as taught by Farwell, to determine whether or not the examinee is telling the truth or trying to conceal information.

Claims 9, 10, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell in view of Sever, Jr. (6057846). Farwell discloses the claimed invention except for the virtual reality system includes at least one of virtual reality glasses, an auditory system and a haptic system and the structure containing auditory and visual systems. Sever, Jr. teaches it is known to provide a psychophysiological influencing system with a virtual reality apparatus that includes both a auditory system and visual system (see Columns 13-14, lines 45-18) for stimulating a psychophysiological response from the examinee, and examining this response. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell with a virtual reality system that includes at least one of virtual reality glasses, an auditory system and a haptic system and the structure containing auditory and visual systems, as taught by Sever, Jr., to stimulate a psychophysiological response from the examinee, and examine this response.

Claims 12, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell in view of Hosaka et al (5603329). Farwell discloses the claimed invention except for the device comprising a second computing unit that is either electronically or wirelessly connected to first computing unit and where in the first computing unit sends data to the second computing unit. Hosaka teaches it is known to

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provide a second computing unit to a medical device for receiving signal inputs from the first computing unit and for additional analysis of patient monitoring, specifically blood pressure (see Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell with a second computing unit as taught by, Hosaka et al, for receiving signal inputs from the first computing unit and for additional analysis of patient monitoring.

Regarding the first two portions of claim 13, these two instructions are inherent in the device, and the last step is covered in the rejection of claim 12 above. For the first two portions of claim 13 see Columns 5-7, lines 5-12.

Regarding claims 15 and 16, Farwell discloses the claimed invention except for the device comprising a second computing unit that is either wirelessly connected or electrically connected to the first computing unit. Hosaka et al has a second computing unit that is electrically connected to the first computing unit so that data can be transmitted from one unit to the other. Although Hosaka et al does not teach a wireless connection between the first and second unit, this would have been obvious to allow the second computing unit to be located remotely from the first computing unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Farwell with an electrically connected second computing unit, as taught by Hosaka et al, so that data can be transmitted from one unit to the other, or wirelessly connected to allow the second computing unit to be located remotely from the first computing unit.

Allowable Subject Matter

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 5,335,882 Ukawa et al disclose a pulse oximeter

U.S. Pat. No. 4,932,416 Rosenfeld discloses a method for the analysis, display and classification of event related potentials by interpretation of P3 responses

U.S. Pat. No. 5,327,889 Harris et al disclose a polygraph automated scoring systems

U.S. Pat. No. 5,564,433 Thornton discloses a method for the display, analysis, classification and correlation of electrical brain function potentials

U.S. Pat. No. 6,702,767 Douglas et al disclose a multisensory stimulation system and method

U.S. Pat. No. 6,754,524 Johnson, Jr. discloses a method for detecting deception

U.S. Pat. No. 6,757,559 Cohen discloses a system for and method of detecting polygraph countermeasures.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Dryden whose telephone number is (571) 272-6266. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MDD


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